What Is
COVID-19?

Alexis Roumanis

From the Author

Explaining COVID-19 to young children can be challenging for families. Over the past four weeks, we decided to use our skills to create free resources for parents and educators to help children understand the significant impact that COVID-19 is having on their lives. Our goal with Level 1, 2, and 4 readers is to empower young children to read about COVID-19 on their own, or with the help of an adult. This simple act empowers young readers, and is an important step in making this situation a little less scary.

As COVID-19 is affecting millions of children across the world, we are striving to translate these books into multiple languages. To support our efforts, physical copies are available for purchase. To help make this book available to as many children and families as possible, this eBook is offered free of charge to everyone.
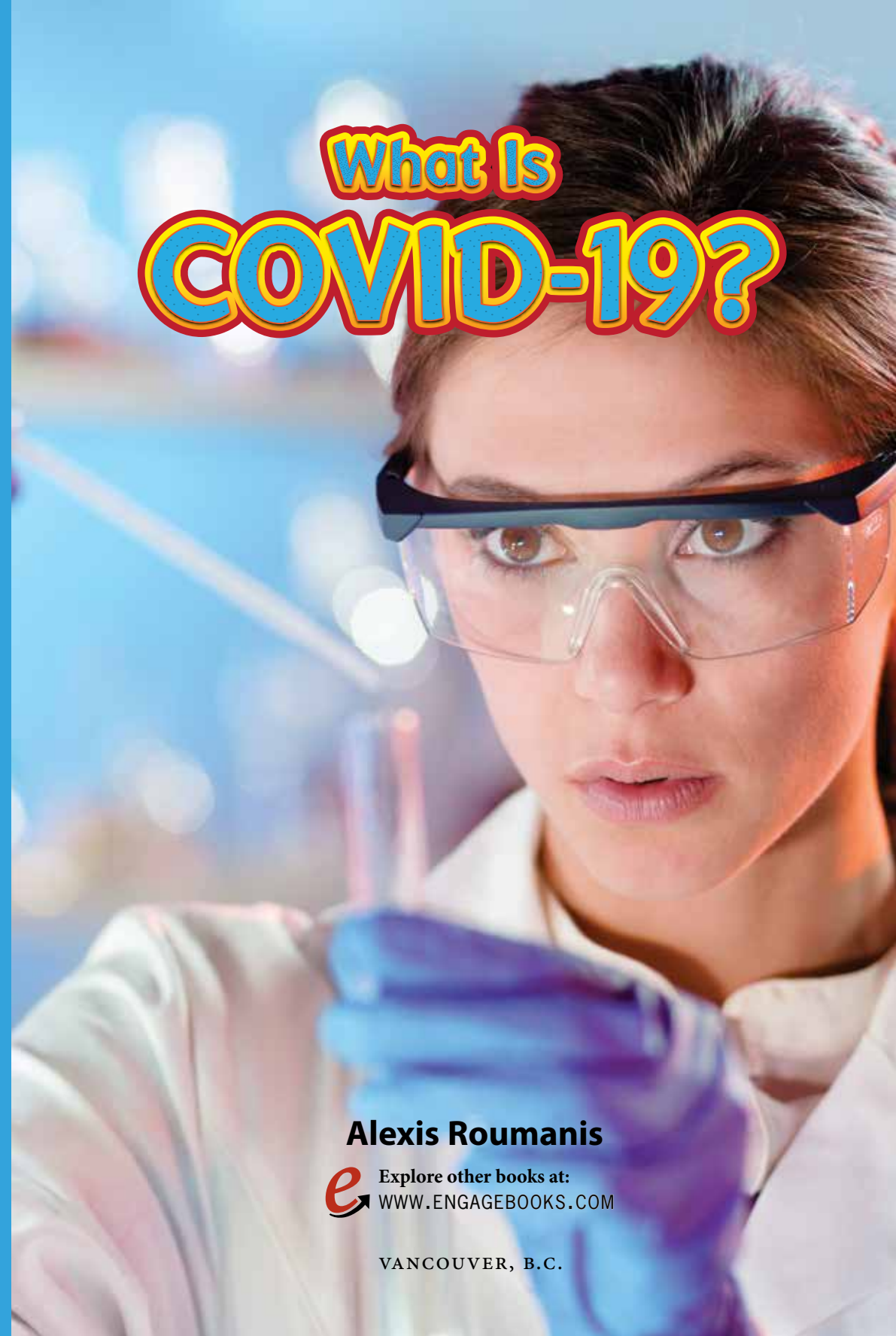
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What Is a Virus?

Viruses are a type of germ. They can survive inside any kind of life form, including animals and plants.

The name *virus* comes from the Latin word *virulentus*, meaning "poisonous."
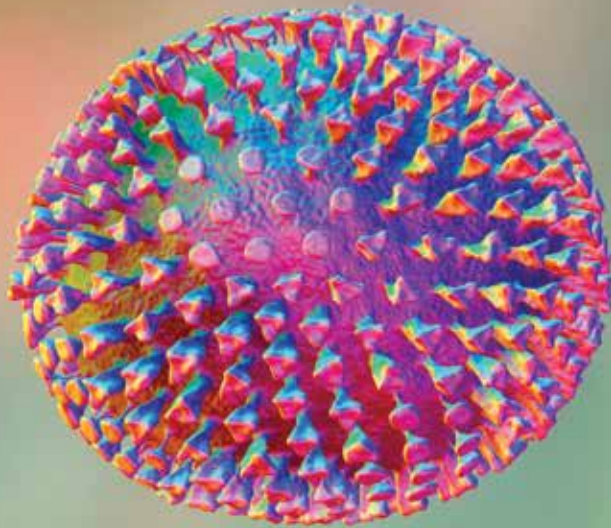
When a virus makes its way inside a life form, it can make copies of itself. As a virus grows, it can make living things sick.

Viruses are so small that they cannot be seen without a **microscope**. Microscopes can magnify viruses by 1,000 times.
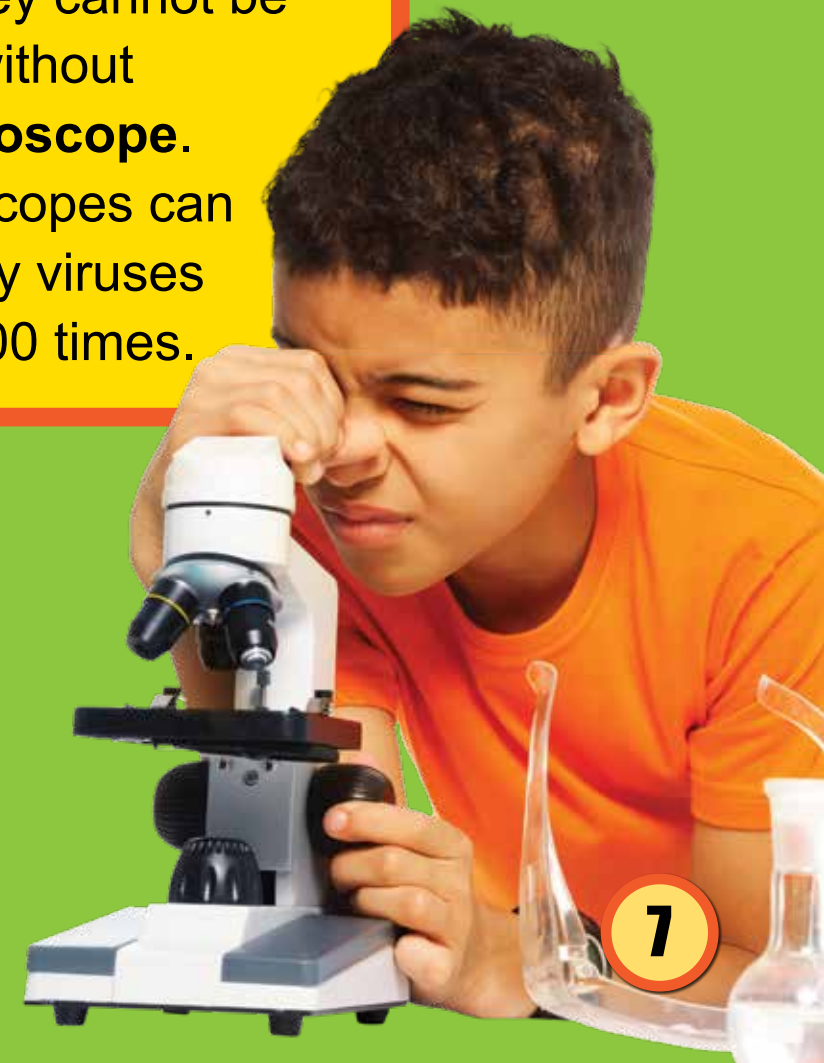
What Are Coronaviruses?

A coronavirus is a type of virus that affects mammals and birds. While there are hundreds of kinds of coronaviruses, only seven affect humans.

The name *coronavirus* comes from the Latin word *corona*, meaning "crown." Scientists gave it this name because of the crown-like points on the surface of the virus.
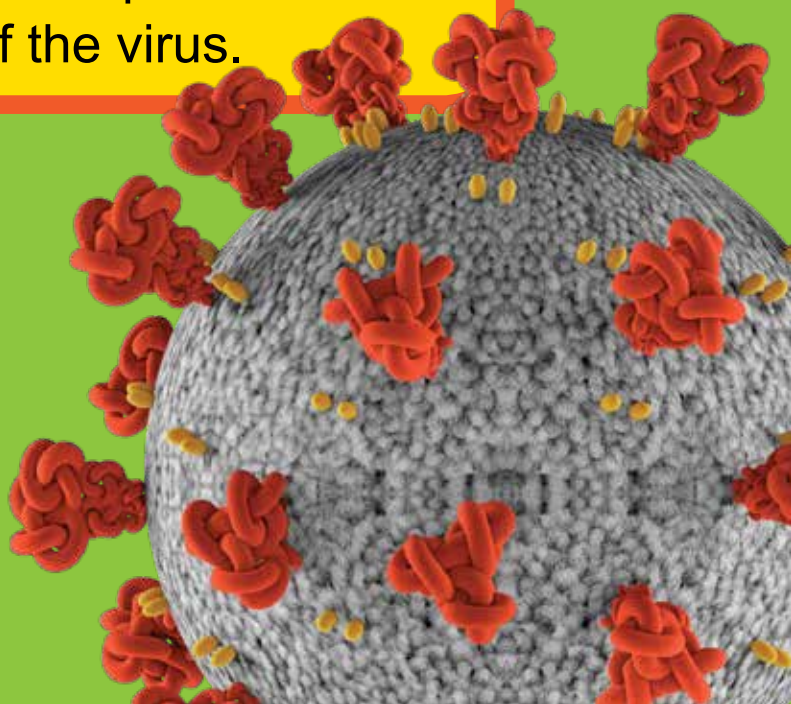
Most people have had a coronavirus at some point in their lives. Common coronaviruses can cause a runny nose, a sore throat, and a cough.

In 2002, a coronavirus called SARS infected about 8,000 people in the world. Doctors believe that SARS spread to humans from horseshoe bats.

What Is COVID-19?

In late 2019, a new coronavirus called COVID-19 began to make people sick in China. It was very **contagious**. It reached more than 170 countries by early 2020. COVID-19 was called a **pandemic** because of how quickly and easily it spread across the world.

Wuhan, China

Many scientists believe that COVID-19 began in bats. The first humans found with the virus lived in Wuhan, China.

Saint Kitts and Nevis

On March 24, 2020, Saint Kitts and Nevis reported cases of COVID-19. It was the last place in the Americas to be virus free.

Italy

Italy is the first country to ask all of its people to stay home because of COVID-19.

Arctic Ocean

Europe

Asia

North America

Atlantic Ocean

Pacific Ocean

Pacific Ocean

Africa

Indian Ocean

South America

Australia

Southern Ocean

Antarctica

10

11

0 2,000 miles

0 4,000 kilometers

N

Legend
Land
Ocean

What Are the Symptoms of COVID-19?

Many people have different reactions to COVID-19. Some people with COVID-19 will feel normal or only slightly ill. Other people get common **symptoms** like coughing, fever, and difficulty breathing.

Some people may get severe symptoms. These include an infection in one or both lungs called **pneumonia**.

Only about 5 percent of people infected with COVID-19 need to go to the hospital.

How Does COVID-19 Spread?

COVID-19 usually spreads from one human to another. When an infected person coughs or sneezes, small droplets can land on others. Touching an infected person can also spread the virus.
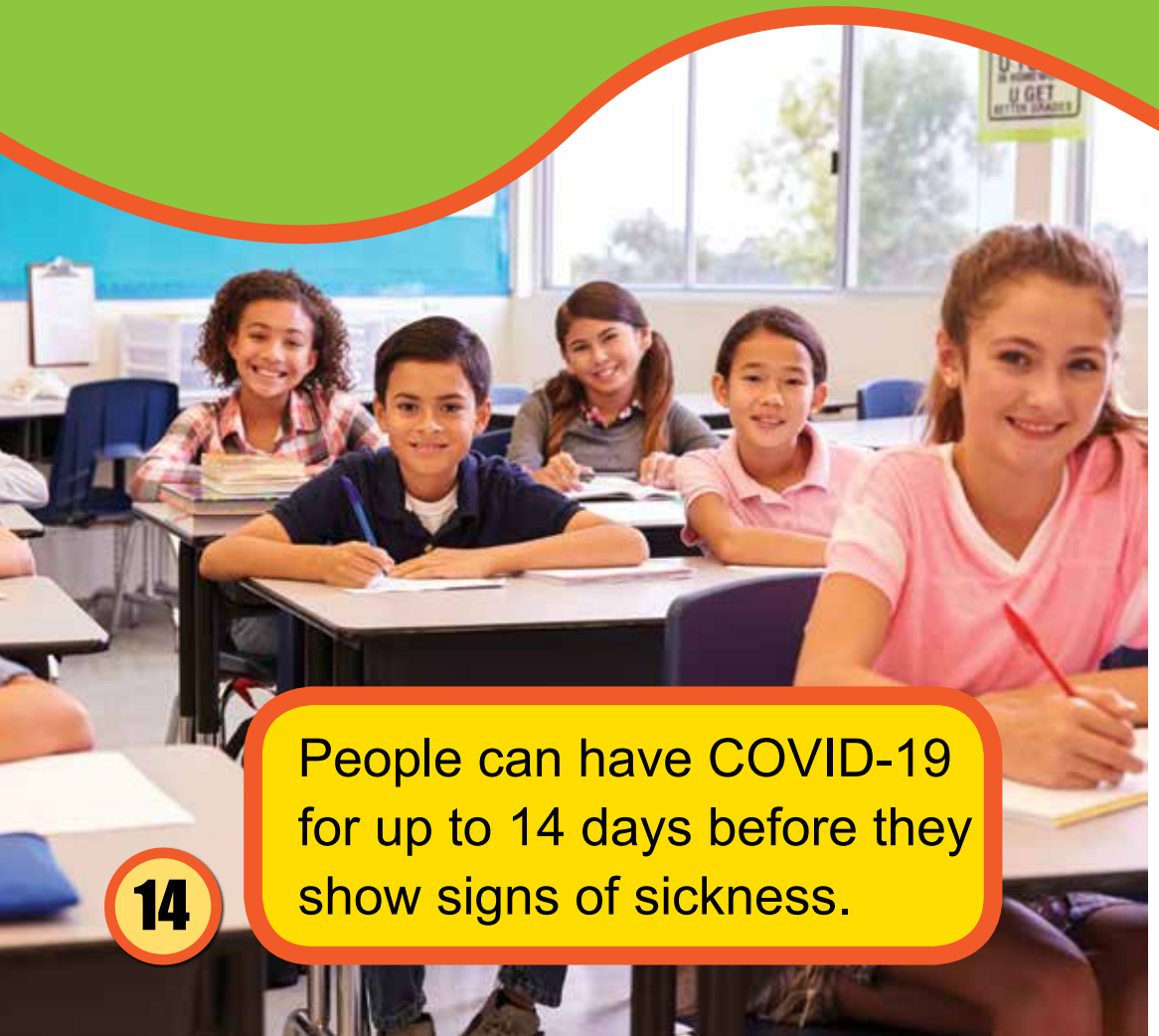
People can have COVID-19 for up to 14 days before they show signs of sickness.

COVID-19 can survive in the air for up to three hours. The virus can also survive on surfaces and can spread when touched. COVID-19 can survive on various surfaces for different lengths of time.

Copper — 4 hours

Cardboard — 1 day

Stainless Steel — 3 days

Plastic — 3 days

How to Stop the Spread of COVID-19

Wash hands with soap for at least 20 seconds.

Clean frequently touched surfaces.

Do not touch eyes, nose, or mouth.

Do not share food and drinks with others.

Sneeze or cough into an elbow.

Keep 6 feet (2 meters) away from other people.

Risks for Different People

Certain people are more likely to become seriously ill from COVID-19 than others. Older adults have a hard time fighting off new diseases like COVID-19. Some people who already have other illnesses are also at a higher risk.

People with heart disease, **diabetes**, high blood pressure, lung disease, and cancer are the most at risk.
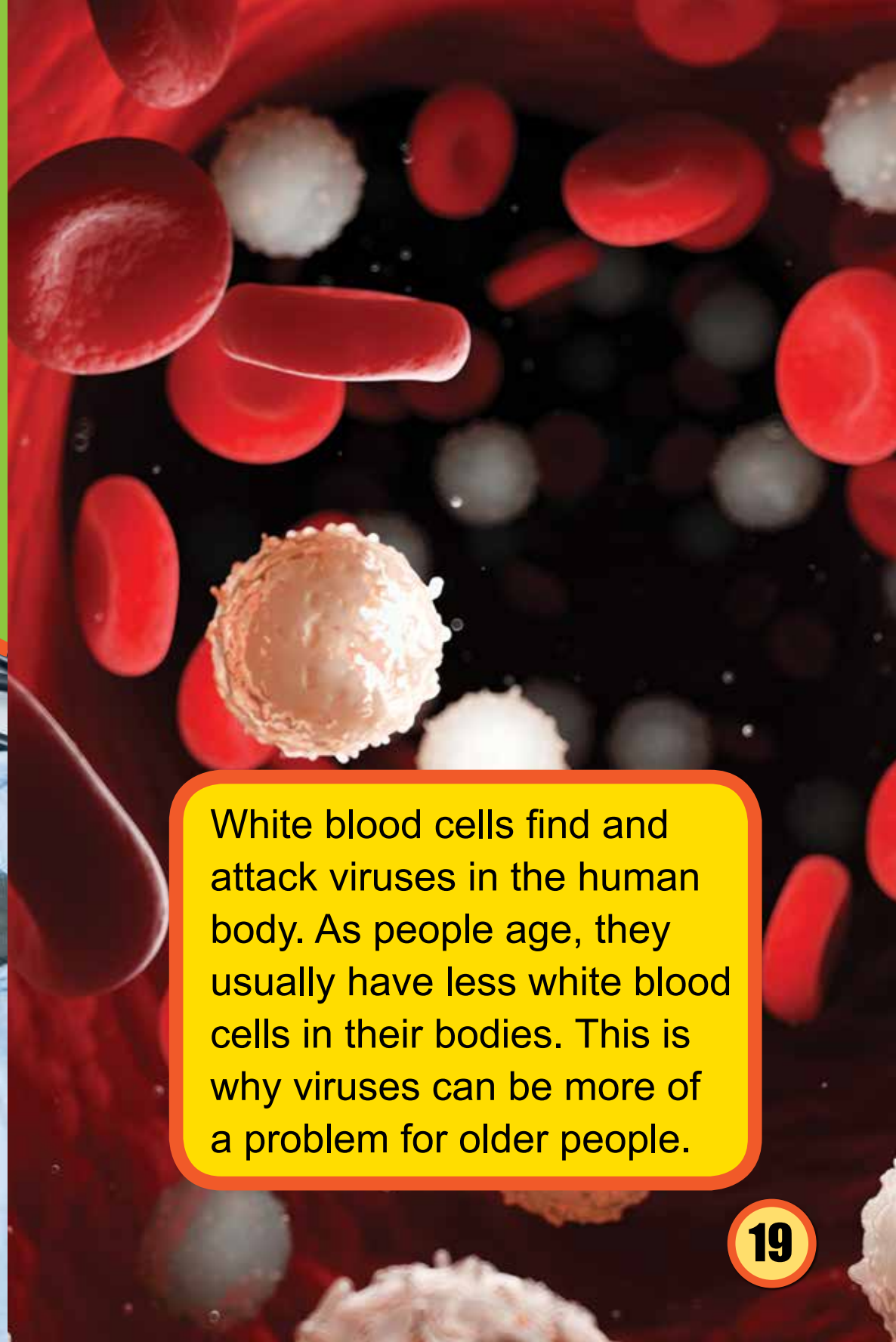
White blood cells find and attack viruses in the human body. As people age, they usually have less white blood cells in their bodies. This is why viruses can be more of a problem for older people.

How Does COVID-19 Affect Children?

Most children under the age of 10 have little to no reaction to COVID-19. However, children can carry the virus and pass it on to others.

Many playgrounds have closed to help stop the spread of COVID-19.

In places where children have continued to play with their friends, the virus spread more quickly. **Social distancing** among children is important to help keep older people safe.
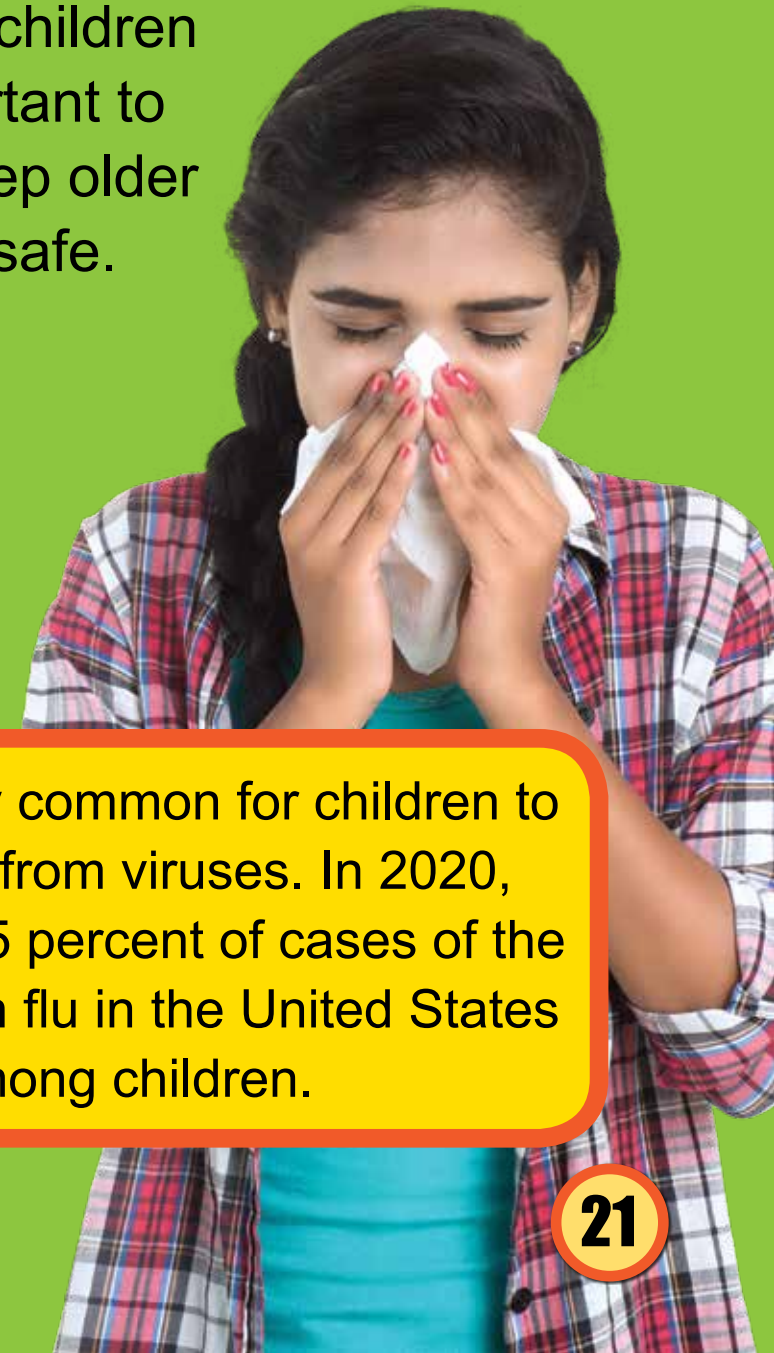
It is very common for children to get sick from viruses. In 2020, about 25 percent of cases of the common flu in the United States were among children.

What Is Social Distancing?

Social distancing is an effort to slow or stop the spread of COVID-19. It is a practice of staying at least 6 feet (2 meters) away from anyone who does not live in the same home.
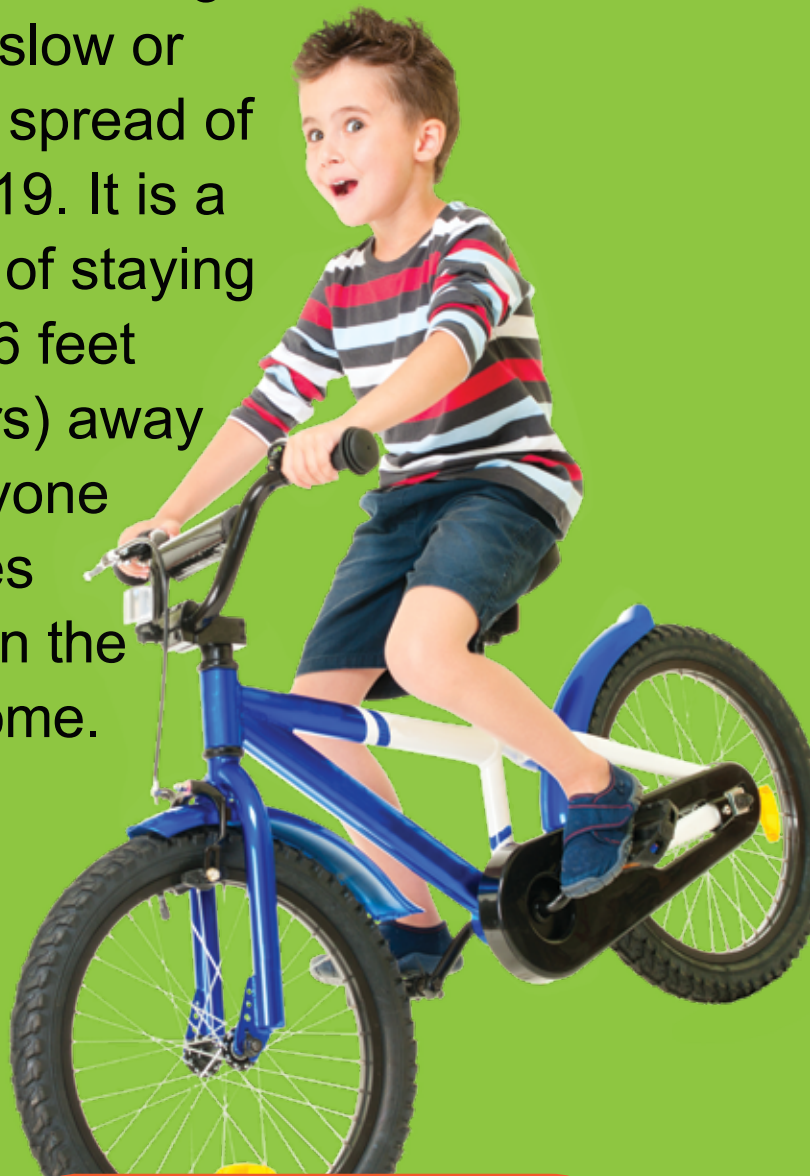
A bicycle is about 6 feet (2 meters) long.

By keeping a safe distance from others, it is difficult for COVID-19 to spread. Social distancing is proven to be one of the best ways to slow the spread of an illness during a pandemic.

Most sports cannot be played while practicing social distancing. To protect athletes, the 2020 Olympic Games in Tokyo, Japan were **postponed** by one year.
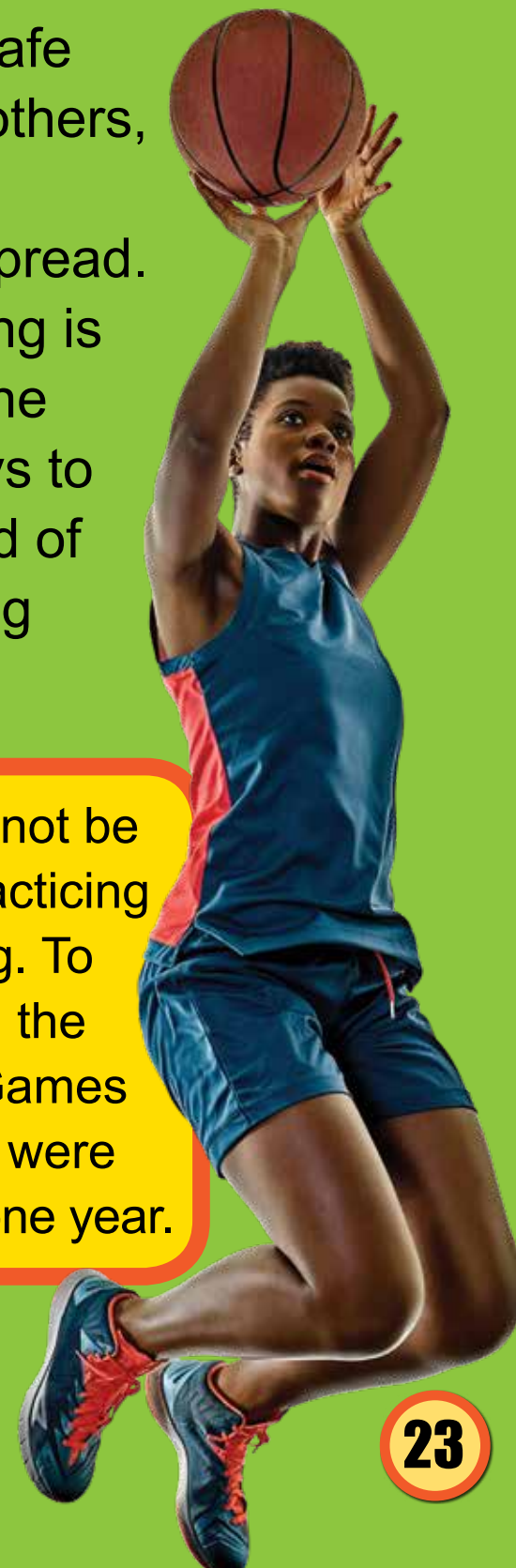
How to Practice Social Distancing

Wave to others instead of giving a handshake, kiss, or hug.

Find creative ways to exercise at home.

Stay at home as much as possible.

Order food and supplies online instead of going to the store.

Talk to friends on a mobile device.

Find and online course and learn a new skill, like playing the guitar.

Why Is Social Distancing Important?

Normally, hospitals have enough doctors, nurses, and beds to take care of sick people. If COVID-19 spreads too quickly, hospitals would be too busy to take care of patients properly.

When social distancing is practiced, fewer people become sick at the same time. This makes sure that sick people can receive as much help as possible when they visit a hospital.

Hospitals only have a certain amount of breathing masks called ventilators. Ventilators are needed to help people who are unable to breathe on their own.

With fewer sick people in hospitals, doctors and nurses are at a lower risk of getting sick themselves.

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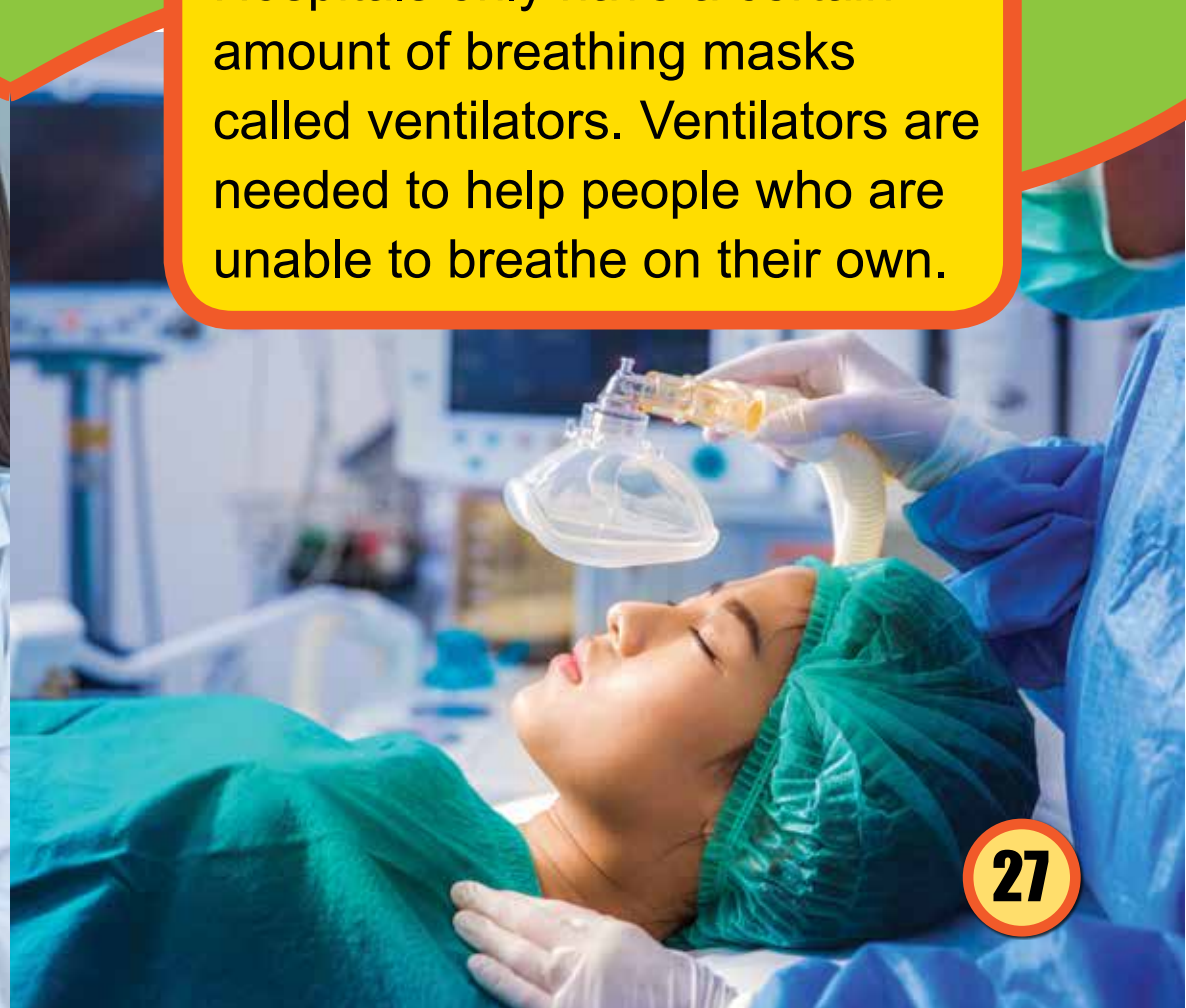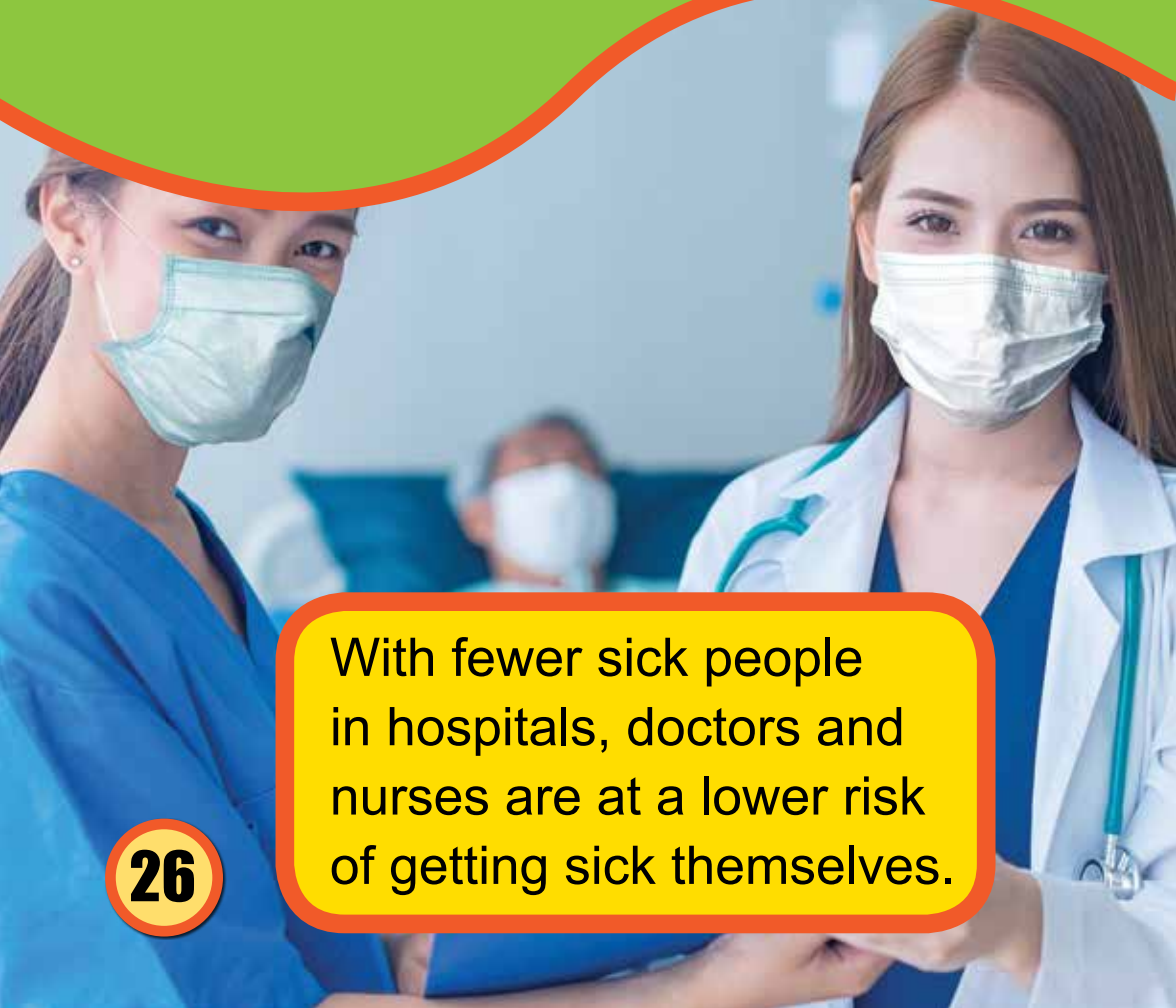
How Are Kids Learning with School Closures?

School closures are one of the many ways that social distancing is practiced. Children can watch video lessons on subjects such as math, writing, art, and science.

Teachers can answer questions from their students through video chat. Millions of children across the world are learning from home.

Google Classroom is a place where teachers can share school work. When completed, students can send their assignments back to their teachers through Google Classroom.

Zoom is a computer program that allows teachers to connect with students through video.
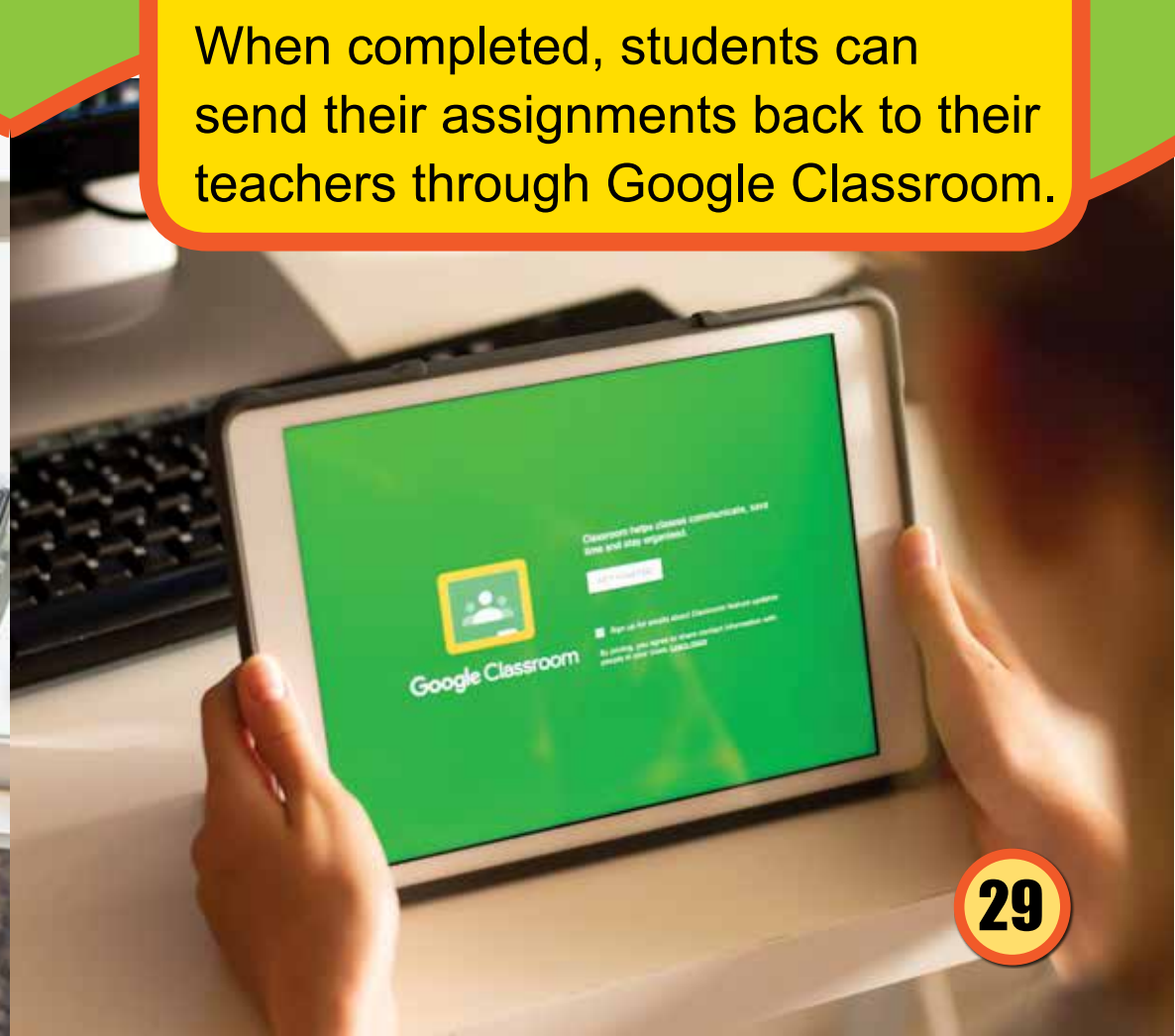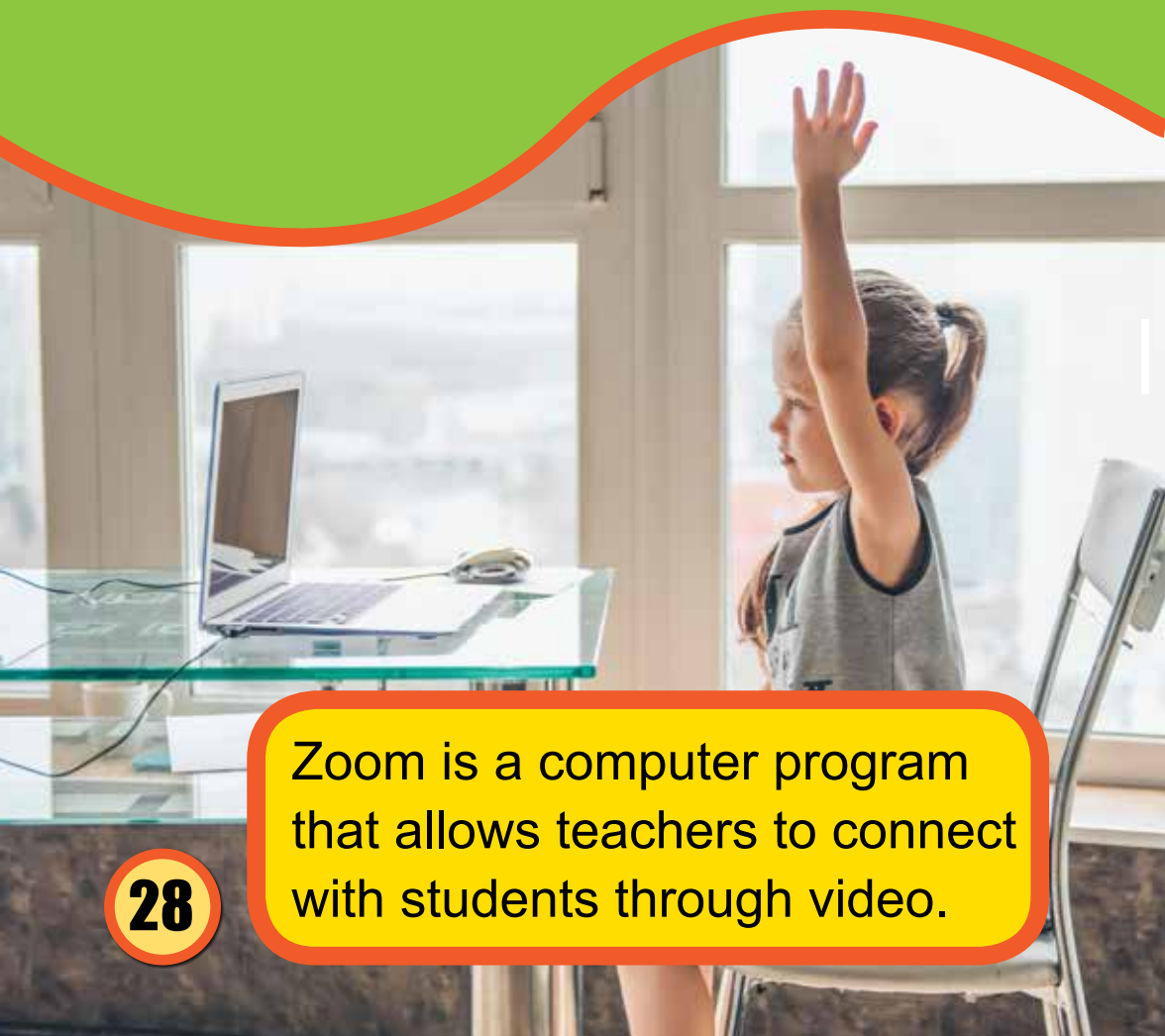
What Should People Do if They Feel Sick?

If someone feels sick, it is important that they return to their home. This helps to make sure that no one else becomes sick.
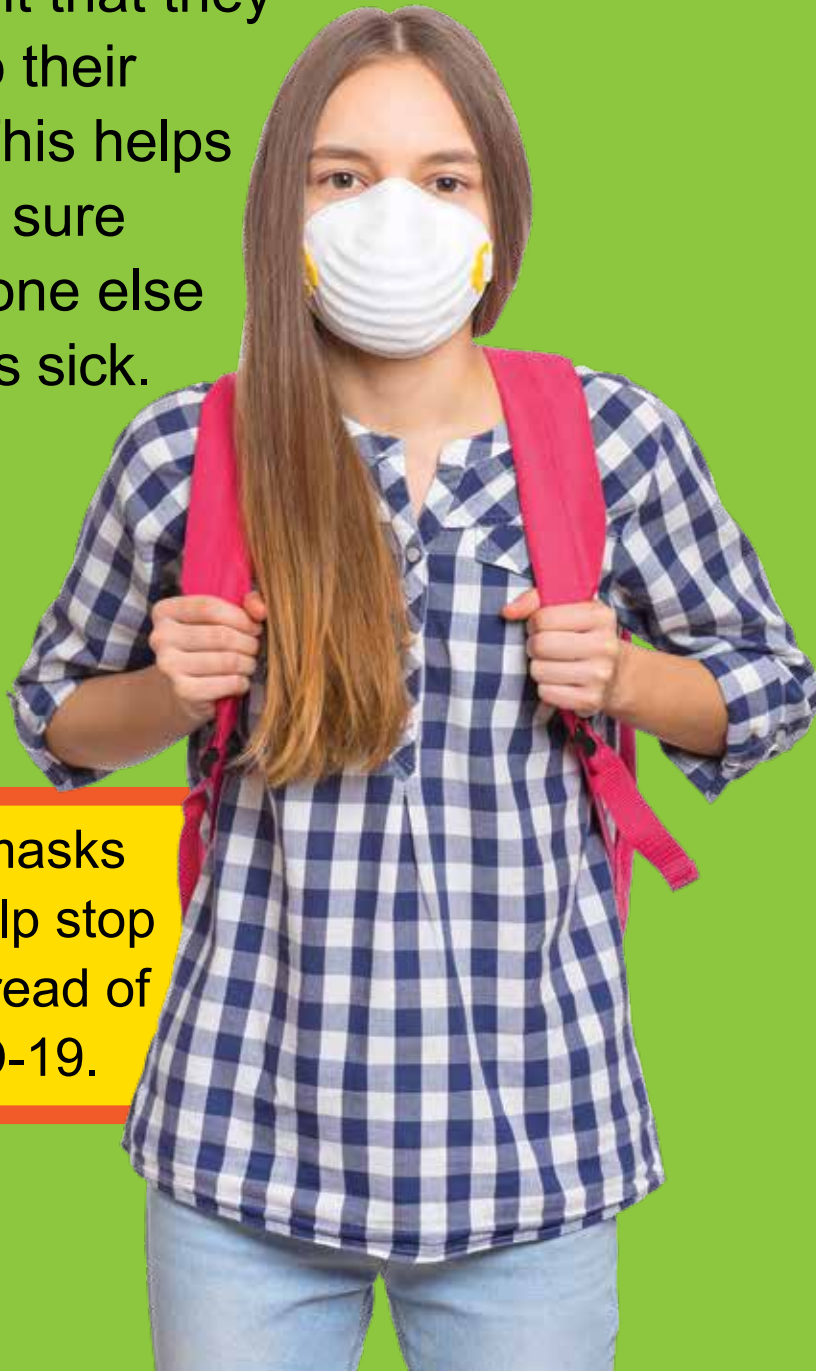
Face masks can help stop the spread of COVID-19.

If someone feels sick, they should avoid using public buses, trains, or taxis. If the person is coughing, has a fever, or has difficulty breathing, they should call a healthcare provider.

A doctor or nurse may ask that sick people stay at home until they feel better.

What Is a Vaccine?

A **vaccine** is a type of medicine that can help fight viruses and other illnesses. Vaccines are made to look similar to the viruses they try to fight.

This helps to teach the body how to fight off the real virus if a person becomes infected. Many health professionals believe that a COVID-19 vaccine could be made in about 18 months.

COVID-19 could return every flu season. A vaccine can help to stop this from happening.

When 95 percent of people become vaccinated, viruses are unlikely to spread to sick people.

How Technology Is Helping During the Crisis

3D printers are being used to create masks and ventilators.

A robot has been created to kill COVID-19 with ultraviolet light.

COVID-19 test kits are helping people to test themselves at home.

Infrared cameras are being used to check people's temperatures.

Drones are being used to deliver supplies to people's homes.

Automatic faucets and soap pumps help keep germs from spreading.

How Car Manufacturers Are Helping

Many car manufacturers across the world have stopped making new vehicles. They are changing their car factories into places where medical equipment can be made. These factories will likely make new cars when the crisis ends.

General Motors has launched 'Project V.' It is a plan to build 200,000 new ventilators at a car factory in Indiana that makes small electronic parts for cars.

Some car factories have started making face masks to help protect doctors and nurses. Other factories are making ventilators to help sick people breathe.

Elon Musk is **repurposing** Tesla's solar panel factory in Buffalo, New York, to make ventilators for people living in New York City.

What Is the World Health Organization?

The World Health Organization helps to make sure that people around the world are healthy. It also watches for new diseases, such as COVID-19. When there is a pandemic, the World Health Organization helps countries with advice and supplies.

There are 194 member countries in the World Health Organization.

Timeline

2019

December 31 — China warns the World Health Organization of about 41 patients in Wuhan with a new kind of pneumonia.

2020

The first COVID-19 case outside China is found in Thailand. — January 13

January 20 — The first COVID-19 case is found in the United States.

The World Health Organization calls COVID-19 a pandemic. — March 11

March 26 — The United States has more COVID-19 cases than any other country in the world.

More than one third of humanity is under some form of **isolation**. — March 31

How to Safely Open Packages

Since COVID-19 could live on packages for 24 hours, ask an adult to take the following steps to keep your household safe.

1. Move packages to a safe place, and wait 24 hours before opening them.
2. Adults could also try opening packages without touching the cardboard.
3. Leave opened cardboard boxes on your porch for 24 hours before recycling them.
4. When an adult is finished touching the packages, make sure that they wash their hands.

When a mail carrier drops off a package, it is important to keep your distance until they leave. This will help keep you and the mail carrier safe.

Planning a Trip to the Store

Sometimes, adults need to visit a pharmacy or grocery store. On a piece of paper, create a checklist for your adult to follow.

1. Wash hands before leaving the house.
2. Do not touch eyes, nose, or mouth while out.
3. Avoid bringing a smartphone to the ear. Hands-free or speaker phone is safer.
4. Keep two grocery cart lengths away from other shoppers.
5. Try to use the tap function on a credit card, or some other type of hands-free payment.
6. Place all bags in the kitchen.
7. Wash hands with soap and water.
8. Wash all vegetables in cold or warm water.
9. Use a kitchen cleaner to clean off paper or plastic packaging.
10. Clean all kitchen countertops.
11. Wash hands one last time.

When choosing an item, an adult should only touch what they will buy.

Make Your Own Hand Sanitizer

During the rapid spread of COVID-19, stores have been selling out of hand sanitizer. With the help of an adult, follow the directions below to make your own hand sanitizer.

Materials:

1/3 cup of
aloe vera gel

Bowl

Funnel

2/3 cup of 99 percent
isopropyl (rubbing alcohol)

Airtight container
or dispenser

3-4 drops essential
oils (optional)

Start by mixing the rubbing alcohol and aloe vera gel in a large bowl. Stir until smooth. Add a few drops of essential oils. Use a funnel to pour the hand sanitizer into the airtight container or dispenser.

In this recipe, the isopropyl alcohol is used to kill germs, while the aloe vera stops your skin from becoming too dry. The essential oils will give the hand sanitizer a scent. Your hand sanitizer can now be used to clean every surface of your hands when needed. Like any kind of hand sanitizer, it is dangerous to swallow hand sanitizer. Ask the adult in your home to put the hand sanitizer in a safe place, out of the reach of smaller children.

How to Wash Your Hands

If you are out in public, you may find it necessary to touch a surface that others have touched, such as a door handle. In these cases, it is important to act like the virus could be on your hands. Never touch your eyes, nose, or mouth, as this is how COVID-19 enters the body. If the virus gets on your hands, it is easy to clean it off by washing your hands for at least 20 seconds using soap and warm water.

1. Use soap.

2. Wash each palm.

3. Wash the backs of each hand.

4. Wash between each finger.

5. Wash the base of each thumb.

6. Wash fingernails in each palm.

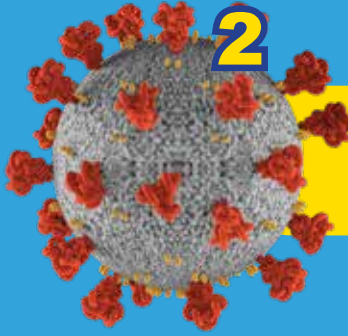**7. Rinse hands.**

8. Dry hands.

Quiz

Test your knowledge of COVID-19 by answering the following questions. The questions are based on what you have read in the text. The answers are listed on the bottom of page 45.

1 Where can a virus make copies of itself?

2 How many types of coronaviruses affect humans?

3 Why was COVID-19 called a pandemic?

4 What is it called when someone has a severe infection in one or both lungs?

5 How far do people need to stay apart for social distancing to work?

6 What helps people who are unable to breathe on their own?

7 What type of cells do people usually have less of as they age?

8 What are made similar to the viruses they are trying to fight?

9 What organization helps to make sure that people around the world are healthy?

10 How long should people wash their hands with soap and water?

Answers:
1. Inside a life form 2. Seven 3. Because of how quickly and easily it spread around the world 4. Pneumonia 5. 6 feet (2 meters) 6. A ventilator 7. White blood cells 8. Vaccines 9. The World Health Organization 10. At least 20 seconds

Key Words

contagious: something that spreads from one life form to another by direct or indirect contact

diabetes: a disease that causes high blood sugar

infrared: a type of light that is made from heat and is invisible to the human eye without a special camera

isolation: to keep separate from others

microscope: a tool that is used to make very small objects appear larger

pandemic: a disease that has spread across a wide area, where the numbers of infected continue to rise

pneumonia: a lung infection that occurs when air sacs in one or both lungs become filled with fluid, making it difficult to breathe

postponed: arranged for something to take place at a later time than first planned

repurposing: the use of something for a purpose other than its original planned use

social distancing: the effort to prevent the spread of a disease by reducing contact and keeping at a distance from other people
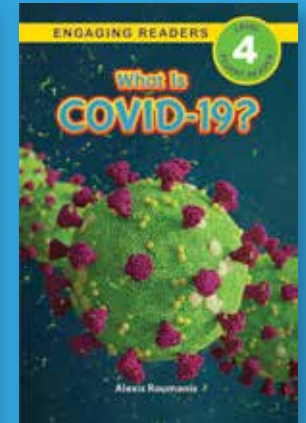
symptoms: signs that suggest the presence of something else

ultraviolet: a type of light that can damage living tissue

vaccine: a type of medicine that is used to train an individual to fight off a disease

viruses: tiny life forms that can infect all types of life forms

Explore other levels in the COVID-19 series.

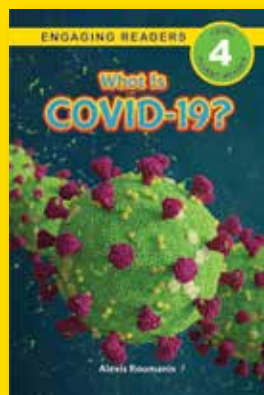Visit www.engagebooks.com to explore more Engaging Readers.

About the Author

Alexis Roumanis graduated from Simon Fraser University's Master in Publishing program in 2009. Since then, he has edited hundreds of children's books, and written more than 100 educational books. His audience includes children in grades K-12 as well as university students. Alexis lives with his wife and three young boys in British Columbia, Canada. He enjoys the outdoors, reading a good book, and has a passion for learning new things.

What Is COVID-19?

COVID-19 has disrupted the lives of children around the world. Learning about the virus is an important way for children to do their part to keep everyone safe. In this level 4 reader, children will learn how COVID-19 spreads, and how to stop the spread of the virus. They will also learn how their actions are helping to keep hospitals from getting too busy. Included are step-by-step instructions on how children can properly wash their hands to kill a virus.

Explore other levels in the COVID-19 series!

ENGAGING READERS
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LEVEL 2 Reading with help

LEVEL 3 Reading independently

LEVEL 4 Fluent reader

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